Remarks

Amendments to the Claims

The amendments to the claims do not add new matter. Claim 2 is amended to recite "heart failure," which is disclosed on page 55, lines 8-12. Claim 2 also is amended to recite that the FPRL2 polypeptide comprises the amino acid sequence SEQ ID NO:2 or an amino acid sequence which is at least 95% homologous to SEQ ID NO:2; this recitation and new claims 33-36 are supported, *e.g.*, on page 9, lines 1-13 and on page 76, lines 25-30.

Rejections Under 35 U.S.C. § 101 and § 112 ¶ 1

The Final Office Action maintains the rejection of claims 2, 27, 28, and 32 under 35 U.S.C. § 101 as lacking utility, with a corresponding rejection for lack of enablement under 35 U.S.C. § 112 ¶ 1. Applicants respectfully traverse the rejections.

The Final Office Action makes several assertions to support the utility rejection. First, in the paragraph bridging pages 3 and 4, the Final Office Action contends that Applicants' asserted utility is not specific and substantial because the specification "does not identify a specific cardiovascular disease that can be treated and what type of therapeutic compound, an agonist or antagonist of FRPL2, can be used for treating a cardiovascular disease."

Claim 2 has been amended to recite heart failure. As explained in Applicants' previous response, before the March 22, 2002 priority date of this application, the skilled artisan knew that stimulation of FPRL2 activates heterotrimeric G-proteins, which leads to an increase in intracellular calcium ion concentration and triggers downstream cellular events.[1] The cellular

[1] See Christophe *et al.*, "The Synthetic Peptide Trp-Lys-Tyr-Met-Val-Met-NH_2 Specifically Activates Neutrophils through FPRL1/Lipoxin A_4 Receptors and Is an Agonist for the Orphan Monocyte-expressed Chemoattractant Receptor FPRL2," *J. Biol. Chem. 276*, 21585-93, June 15, 2001, which is provided with the accompanying IDS.

event triggered by an increase in intracellular calcium in cardiomyocytes is their contraction, which defines cardiac function. In other words, contracting cardiomyocytes pump blood at a rate commensurate with the requirements of the metabolizing tissue. See page 55, lines 8-12 of the specification. Thus, by modulating intracellular calcium ion concentrations in cardiomyocytes (*i.e.*, by modulating FPRL2 activity), one could modulate the pumping force of the heart. Those of skill in the art know that the right atrium and ventricle contain cardiomyocytes. Combined with the high expression of FPRL2 in these tissues disclosed in the specification (see page 86, table 1), the skilled artisan can readily use the claimed screening methods to screen for therapeutic agents which regulate FPRL2 activity and which therefore could be used to treat heart failure. Identified inhibitors can be used to treat high-output heart failure, and identified activators can be used to treat low-output heart failure.

Second, at the bottom of page 3, the Final Office Action points out that "the prior art does not provide teachings on a causative link between the FPRL2 polypeptide and a specific cardiovascular disease." This is tantamount to rejecting the claims because the prior art does not teach the invention. Moreover, a causative link to a heart failure is not required for a particular drug target to be useful for treating heart failure. Heart failure occurs because heart muscle is damaged or dead. Current treatments for heart failure do not restore the damaged muscle or cause heart cell regeneration.

One skilled in the art would recognize that a screening method for agents that regulate FPRL2 activity has utility for identifying therapeutic agents useful in the treatment of heart failure. Please withdraw the rejections under 35 U.S.C. §§ 101 and 112 ¶ 1.

Rejection Under 35 U.S.C. § 112 ¶ 2

Claims 2, 27, 28, and 32 stand rejected under 35 U.S.C. § 112 ¶ 2 because the term "FRPL2" allegedly is indefinite. To advance prosecution, claim 2 is amended to recite that the FPRL2 polypeptide comprises the amino acid sequence SEQ ID NO:2 or an amino acid sequence which is at least 95% homologous to SEQ ID NO:2.

Please withdraw the rejection.

Respectfully submitted,

BANNER & WITCOFF, LTD.

/Lisa M. Hemmendinger/

Date: May 9, 2008 By: _____

Lisa M. Hemmendinger

Customer No. 22907 Registration No. 42,653